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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,208	09/25/2000	You-Sung Chang	68141675-2006000	4052

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EXAMINER

SORRELL, ERON J

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/669,208

Applicant(s)

CHANG ET AL.

Examiner

Eron J Sorrell

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2182

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldara et al. (U.S. Patent No. 5,982,771 hereinafter "Caldara") in view of Mathur (U.S. Patent No. 6,424,658) and further in view of Christensen et al. (U.S. Patent No. 5,644,577 hereinafter Christensen).

3. Referring to method claim 1, system claim 8, and computer program claim 15, Caldara discloses a method and system for transferring an incoming datagram comprising:

receiving data of a datagram utilizing an interface receiver, wherein the pair of buffers are uniquely associated with the interface receiver to receive only data from an incoming datagram received by the interface receiver (see

Art Unit: 2182

paragraph bridging columns 1 and 2, lines 11-24 of column 5, and figure and item labeled 14 in figure 1A);

sequentially filling the buffer portions with the data from the datagram (see items labeled 14 in figure 1a and lines 66-67 of column 1 and lines 1-12 of column 2);

periodically allowing transfer of data from the buffers into a (see lines 32-39 of column 2); and

transferring the data in one of the buffer portions into switch matrix at each period where transfer is allowed and in the sequence the buffer portions were filled (see lines 32-39 of column 2).

Caldara fails to disclose a switch matrix that can store the data of the datagram.

Mathur discloses, in an analogous system, a method for storing an incoming datagram in a switch matrix of a switch fabric wherein the data is stored in the switch matrix after being transferred from the input buffers (see lines 7-11 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the switch of Caldara with that of Mathur such that the switch matrix is capable of storing the incoming packets. Mathur suggests this modification results in a switch with better

Art Unit: 2182

performance and that can add a larger number of ports without increasing the cost of the switch (see lines 35-52 of column 3).

The combination of Caldara and Mathur fails to teach that each buffer has a storage capacity less than the size of the incoming datagram.

Christensen teaches, in an analogous system, a method for transferring data through a switch, wherein the capacity of the buffers is less than the size of the incoming datagram (see lines 28-31 of column 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Caldara and Mathur with the teachings of Christensen such that the capacity of the buffers is less than the size of the incoming datagram in order to maintain data frame continuity between a high capacity communication link and a lower capacity node connected to the link as suggested by Christensen (see lines 12-15 of column 1).

4. Referring to method claim 2, system claim 9, and computer program claim 16, Mathur discloses the buffers should be large enough to hold an entire datagram, thus the end of the datagram (see lines 57-65 of column 6) and that the buffer holds the

Art Unit: 2182

datagram before sending it to the switch Matrix (see lines 41-47 of column 6).

5. Referring to method claim 3, system claim 10, and computer program claim 17, Mathur discloses the matrix comprises a plurality of memory banks for storing the transferred data (see figure 9 and lines 10-16 of column 11).

6. Referring to method claim 4, system claim 11, and computer program claim 18, Mathur discloses the memory banks alternate in receiving data from the buffers (see lines 44-56 of column 11).

7. Referring to method claim 5, system claim 12, and computer program claim 19, Caldara discloses the buffer portions have equal storage capacity (see items labeled 132a, 132b, and 132c in figure 1a).

8. Referring to method claim 6 and system claim 13, Christensen teaches the buffers can be of any size and can be adjusted to maximize performance (see lines 49-64 of column 3).

9. Referring to method claim 7, system claim 14, and computer program claim 20, Mathur discloses the rate at which data is

Art Unit: 2182

allowed to be transferred is fully controllable by the system administration software, thus transfer of data could be allowed every 16 cycles.

10. Referring to claim 21, see discussion of method claims 1-5.

**Response to Arguments**

11. Applicant's arguments filed 7/9/03 have been fully considered but they are not persuasive. The applicant argues: 1) the Caldara reference utilizes more than a pair of buffers (i.e. three or more buffers) to handle incoming data (see paragraph three on page 7 of the applicant's remarks).

12. **As per argument 1**, the Examiner disagrees. Although item 14 of figure 1a shows three buffers as pointed out by the applicant, the description of this figure states that item 14 comprises a **plurality of buffers** and makes no numerical limitation (emphasis added) (see lines 11-24 of column 5). It is the position of the Examiner that a plurality of buffers need only comprise more than one buffer, therefore a pair of buffers is indeed taught by Caldara.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made. Applicant must also show how the amendments avoid such references and objections. See 37 CFR § 1.111(c).

The following references are cited to further show the state of the art as it pertains to data transfer systems with switches:

U.S. Patent No. 5,974,518 to Nogradi

U.S. Patent No. 6,016,511 to Cook

Both of the above listed references teach the limitation of making the size of the buffer used for storing incoming data less than the size of the incoming data.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this



action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 703 305-7800. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

EJS  
September 8, 2003



JEFFREY GAFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100